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**Additional Testimony before the House Transportation Committee on HB 5104 -
Truck Speed Limits**

Mr. Chairman, members of the Committee, thanks for the opportunity to add to my previous testimony from September 13th..

I faxed a copy to the Committee Clerk of the 1989 press release by the AAA Foundation for Traffic Safety on their study showing no safety benefits for differential speed limits for trucks dated 11/89, and a copy is attached here. Another version of that study funded by AAA was published in 1991, and the 2 page AAA press release for that version dated 4/91 is attached.

I researched several newer studies to see if research conclusions had changed lately, and most researchers agreed with the earlier AAA Foundation for Traffic Safety studies.

Attached is the Cover, Abstract, and Conclusions pages from a recent study presented at the Transportation Research Board annual meeting in 2003. I provided the Committee Clerk with two copies of that full study, should any member wish to read the entire document. In a nutshell, the newer study also showed no safety benefits for differential truck speed limits.

I repeat my belief that HB5104 could safely remove the differential truck speed, or at a minimum make the truck limit 65 mph, to reduce speed variance and improve traffic flow for all vehicles. A previous attempt to remove or reduce the truck speed differential under HB4377 of 1999 failed, despite testimony from Dr. Taylor at MSU and others that it would be proper. The 85th percentile speed for trucks was then 66 mph, just like today's 64-67 mph.

A posted limit of 65 or 70 mph for trucks and other vehicles with trailers would have high compliance and would tend to reduce speed variance. It seems improper to impose a truck speed limit which has almost no compliance, and which tends to increase speed variance, when there is no demonstrable safety benefit.

Using 85th percentile posted speed limits has almost universal support from the scientific community of unbiased traffic safety researchers, those researchers who are not influenced directly or indirectly by traffic ticket revenue or insurance company surcharges for tickets.

I believe Michigan's traffic laws should support the unbiased science involved.

Sincerely,



James C. Walker

Attached: Two AAA Foundation for Traffic Safety press releases and a TRB paper

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**NO SAFETY BENEFITS ACHIEVED IN TRUCK LANE AND
SPEED CONTROL STRATEGIES REPORTS AAA FOUNDATION**

Imposing lane and speed restrictions on truck operations on multilane highways has been utilized to attempt to improve the safety and the quality of traffic flow on these highways. A study sponsored by the AAA Foundation for Traffic Safety which was conducted by the University of Virginia's School of Engineering and Applied Science has concluded that no safety benefits resulted from the imposition of speed and lane restrictions on trucks. In fact, the study concludes that the potential for an increase in accidents involving trucks and other vehicles occurs when such strategies are imposed on highways with high traffic volumes which include a high percentage of trucks.

UVA researcher, Dr. Nicholas Garber reported that restricting trucks to the right lane resulted in a decrease of the vehicular headways in this lane. Decreasing vehicular headways causes a reduction in the number of acceptable gaps available for drivers wanting to merge from entrance ramps. This in turn creates the "barrier" effect making it very difficult to merge and a hazardous situation for all motorists at entrance ramps. This negative effect is even more significant on highways having three or four lanes in each direction carrying an average daily traffic greater than 75,000 vehicles and with a proportion of trucks greater than 4 percent.

Other negative results of truck lane and speed control strategies are congestion and an increase in the skewness of speed distributions. As the percentage of trucks in the traffic stream increases, the potential for accidents increase. The more hazardous conditions concentrated in the right hand lane by such strategies do not significantly change speed distributions and accident potential of other lanes.

A copy of the report "The Effect of Truck Traffic Control Strategies on Traffic Flow and Safety on Multilane Highways" may be obtained by contacting the AAA Foundation for Traffic Safety, 1730 M Street, N.W., Suite 401, Washington, D.C. 20036, (202-775-1456).

AAA

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FOR IMMEDIATE RELEASE

DIFFERENT SPEED LIMITS FOR TRUCKS AND CARS PROVIDE NO SAFETY BENEFITS

Ten states have different maximum speed limits for trucks and cars based on the theory that a lower speed for trucks would reduce conflicts between cars and trucks and thus result in lower accident and injury rates. But, there is very little evidence to support this theory of speed control.

In fact, a new AAA Foundation for Traffic Safety study conducted by the University of Virginia's Department of Civil Engineering reports that there is no safety benefit from differential truck/car speed limits and that there is evidence that different speed limits for trucks and cars may actually result in higher rates of certain kinds of accidents such as rear-enders and sideswipes.

The speed study was commissioned by the AAA Foundation because the recent change by most states to higher 65 mph speed limits on rural interstates provided an opportunity to test the differential maximum speed practice because some states permitted cars to go 65 mph but kept the limit for trucks at 55 mph. The analysis covered specific highway locations in California, Maryland, Michigan, Virginia and West Virginia. One highway location in Virginia and West Virginia provided an unique opportunity to test this theory because the two states used different speed approaches on the same highway.

Several other interesting findings resulted from the University of Virginia speed study:

* In those states where cars were permitted to go faster (55 - 65 mph) the mean speeds of cars increased only from 1 to 4 mph, from a speed range of 61-64 mph to 62-67 mph. In other words, because most motorists were already driving over the old 55 mph speed limit, when the maximum speed limit was increased to 65, car speeds increased relatively little, for motorists tend to drive close to the design speed of the highway regardless of what signs say.

MORE

* In states where both trucks and cars were permitted to go 65 mph, speed variance -- vehicles traveling at different speeds on the same roadway -- decreased and this was good, for previous studies have demonstrated that accidents decrease when speed variance decreases or, in other words, when all traffic is moving at approximately the same rate of speed. The study also showed that differential speed limits for trucks/cars increased speed variance.

* In states which increased speed limits to 65 for all vehicles, there was no resulting significant increase in accidents.

* No spillover effects on adjoining roads was evidenced in areas where the 65 mph was utilized. This has always been a major argument of critics of the higher speed limits.

Differential speed limits for cars and trucks have been in use for a long time, but researchers find little evidence to justify continuing this practice. It may cause more problems than it solves would be the conclusions of the University of Virginia researchers who prepared the AAA Foundation report. Copies of the report, "Impact of Differential Speed Limits on Highway Speeds and Accidents" may be obtained by contacting the AAA Foundation for Traffic Safety, 1730 M Street, N.W., Suite 401, Washington, D. C. 20036, (202) 775-1456).

THE SAFETY IMPACTS OF DIFFERENTIAL SPEED LIMITS ON RURAL INTERSTATE HIGHWAYS

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ABSTRACT

To compare the safety effects of a uniform speed limit (USL) for all vehicles as opposed to a differential speed limit (DSL) for cars and heavy trucks, crash, speed, and volume data were obtained from ten states for rural interstate highways for the period 1991 to 2000. These states were divided into four policy groups based on the type of speed limit employed during the period: maintenance of a uniform limit only, maintenance of a differential limit only, a change from a uniform to a differential limit, and a change from a differential to a uniform limit. Statistical tests (analysis of variance, Tukey's test, and Dunnett's test) and the Empirical Bayes Method were used to study speed and crash rate changes in the four policy groups. This paper focuses only on the statistical tests.

No consistent safety effects of DSL as opposed to USL were observed within the scope of the study. The mean speed, 85th percentile speed, median speed, and crash rates tended to increase over the ten year period, regardless of whether a DSL or USL limit was employed. When all sites within a state were analyzed, temporal differences in these variables were often not significant; however, in several cases, significance was observed if one then excluded sites with unusually high or low traffic volumes from the data set. Further examination suggests that while these data do not show a distinction between DSL and USL safety impacts, the relationship between crashes and traffic volume cannot be generalized but instead varies by site within a single state.

CONCLUSIONS

1. *Speed characteristics were generally unaffected by a differential versus uniform speed limit policy.* Except in Virginia, mean, 85th percentile, and median speeds tended to increase over the 1990s regardless of whether the state maintained a uniform limit, maintained a differential limit, or changed from one to the other. In some cases the difference was significant, in other cases the difference was not significant.
2. *Crash rates*, when compared using conventional statistical methods, did not show an obvious relationship to the type of speed limit chosen. When states were stratified into four policy groups (uniform, differential, shift from uniform to differential, and vice-versa), the changes in crash rates and crash rate types did not all correspond to one group.
3. *Measurable variation within speeds and crash rates by year and by state may confound any statistical tests employed.* The performance of Illinois annual speed variances as shown in Figure 3 is indicative of the noise associated with random variation, where the annual speed variance has an insignificant but observable upwards and downwards trend despite the fact that Illinois made no policy changes to its speed limits.
4. *Removal of sites with high and low ADT made it easier to detect significant differences between before and after periods, suggesting that ADT does influence crash trends.* As was observed in Table 5, this ADT filtering did not change the finding that there is no consistent relationship between speed limit type and crash rate; further, the effect of ADT on crash rate is not clear. This study simply suggests that, through different mechanisms not yet proven by the investigators, change in ADT may have disproportionate changes in crash rates.

ACKNOWLEDGEMENTS

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